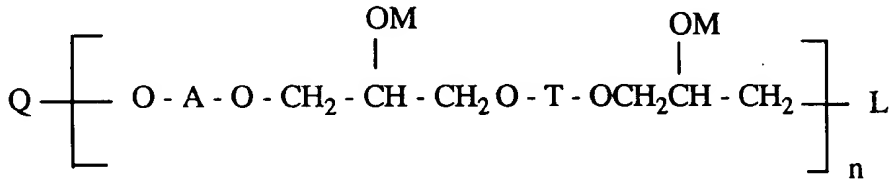
What is claimed is:

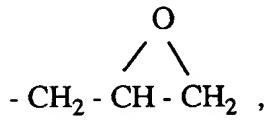
1. An epoxy acrylate of formula (III)



(III)

wherein

Q is hydrogen or a group of formula



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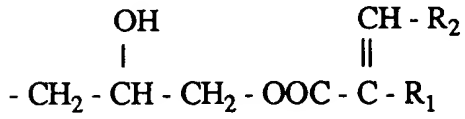

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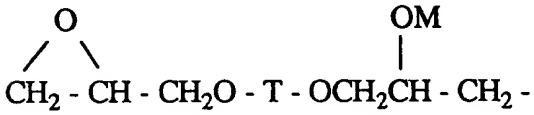
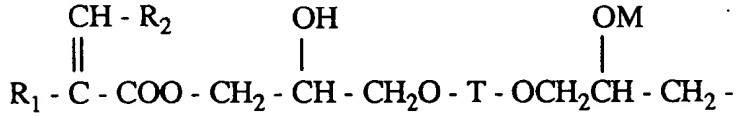


or

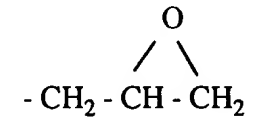


,

R_1 is -H or -CH_3, R_2 -H, -CH_3 or phenyl

T is the radical of an aromatic bifunctional compound, and

M is each independently hydrogen or a group of formula



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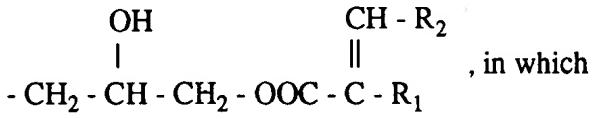


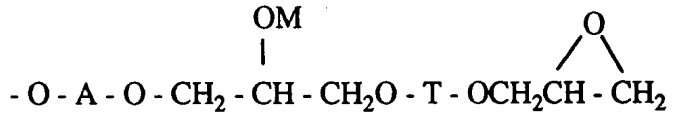
, in which

R_1 and R_2 are as defined above,

A is the radical of an aromatic bifunctional compound,

n is an integer from 0 to 300, and

L is a group of formula



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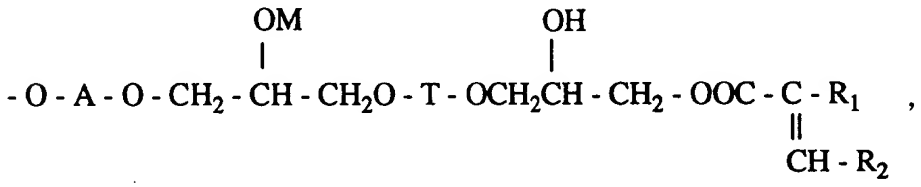
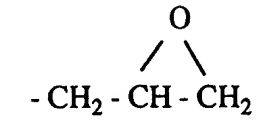


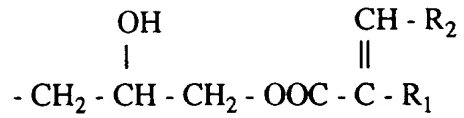
,

or - O - A - OM ,

with the proviso that in formula III not all radicals M may be simultaneously hydrogen or a group of formula



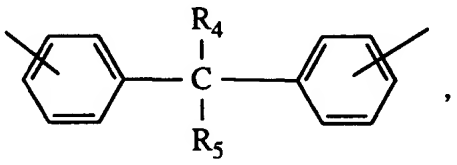
but at least 10 mol %, preferably 20-100 mol %, of the radicals M that are not present in the end groups Q and L denote a group of the above formula



wherein R_1 and R_2 are as defined above.

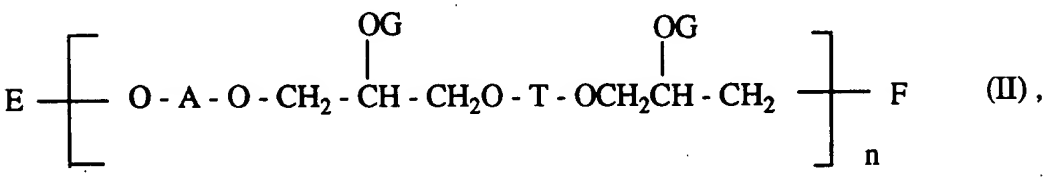
2. An epoxy acrylate of formula III according to claim 1, wherein R_1 is hydrogen or methyl and R_2 is hydrogen, methyl or phenyl.

3. An epoxy acrylate of formula III according to claim 1, wherein n is an integer from 0 to 50 and A and T are each independently of the other a linking group of formula



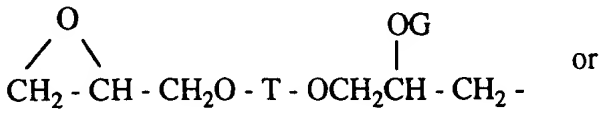
wherein R_4 and R_5 are each independently of the other -H or C_1-C_4alkyl and the phenyl radicals of said linking group are unsubstituted or bromine-substituted.

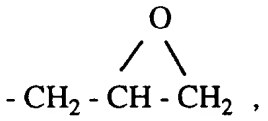
4. A process for the preparation of an epoxy acylate of formula (III) according to claim 1, which comprises reacting a postglycidylated epoxy resin of formula II



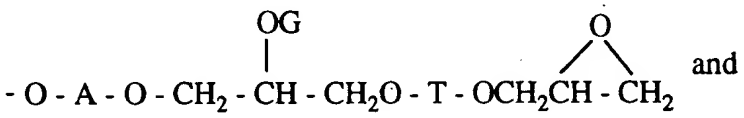
wherein

E is hydrogen or a group of formula

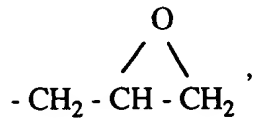




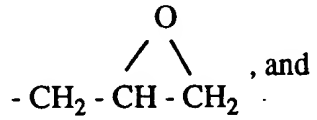
F represents the groups of formula - O - A - OG or



and

G is -H or the radical  ,

with the proviso that, in formula II, at least 10 mol % of the radicals G that are not present in the end groups E and F represent the group of formula

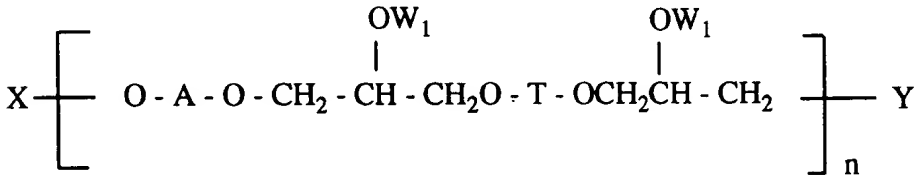


, and

A, T, and n are as defined in claim 1,

with an ethylenically unsaturated monocarboxylic acid in the presence of a catalyst and a polymerisation inhibitor, at elevated temperature.

5. A carboxyl group-containing epoxy acrylate of formula IV



(IV)

wherein

X is hydrogen or a group of formula

$$-\overset{\overset{\displaystyle O}{\|}}{C}-R_3-COOH\ ,$$

$$-CH_2-\overset{\overset{\displaystyle OW_2}{|}}{CH}-CH_2OOC-\overset{\overset{\displaystyle R_1}{|}}{C}=CH-R_2 \quad \text{or}$$

$$-CH_2-\overset{\overset{\displaystyle OW_1}{|}}{CH}-CH_2O-T-OCH_2\overset{\overset{\displaystyle OW_2}{|}}{CH}-CH_2OOC-\overset{\overset{\displaystyle R_1}{|}}{C}=CH-R_2\ ,$$

R_3 is the radical of a cyclic anhydride of a polycarboxylic acid after removal of the anhydride radical,

W_1 is hydrogen or a group of formula

$$-\overset{\overset{\displaystyle O}{\|}}{C}-R_3-COOH \quad \text{or}$$

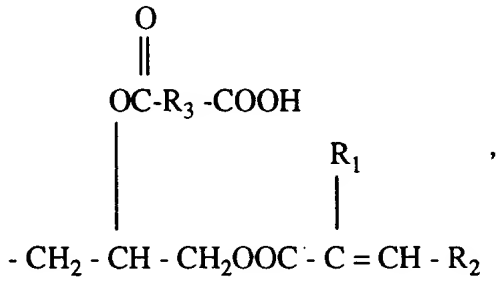
$$-CH_2-\overset{\overset{\displaystyle OW_2}{|}}{CH}-CH_2OOC-\overset{\overset{\displaystyle R_1}{|}}{C}=CH-R_2\ ,$$

W_2 is -H or the group $-\overset{\overset{\displaystyle O}{\|}}{C}-R_3-COOH$, and

Y is the group of formula $-O-A-O-W_1$ or

$$-O-A-O-CH_2-\overset{\overset{\displaystyle OW_1}{|}}{CH}-CH_2O-T-OCH_2\overset{\overset{\displaystyle OW_2}{|}}{CH}-CH_2OOC-\overset{\overset{\displaystyle R_1}{|}}{C}=CH-R_2\ ,$$

wherein the symbols A, T, R_1, R_2, R_3 and n are as defined in claim 1, with the proviso that, in formula IV, at least 10 mol % of radicals W_1 that are not in the end groups X and Y are a group of formula



wherein R_1 and R_2 are as defined in claim 1 and R_3 is as defined in claim 5.

6. A process for the preparation of a carboxyl group containing epoxy acrylate of formula IV as claimed in claim 5, which comprises reacting an epoxy acrylate of formula III as claimed in claim 1 with a cyclic anhydride of a polycarboxylic acid, in the absence or presence of a catalyst and of a polymerisation inhibitor, at elevated temperature.

7. A method for preparing photoresist formulations comprising the use of an epoxy acrylate of formula III as claimed in claim 1 as acrylate component.

8. A method for preparing photoresist formulations comprising the use of a carboxyl group-containing epoxy acrylate of formula IV as claimed in claim 5 as acrylate component.